

## CLAIMS

I claim:

1. A composition useful for producing a polyurethane foam, the composition  
5 comprising a blowing agent comprising a hydrofluorocarbon, and a blowing agent  
enhancer comprising at least one compound having a molecular weight less than about  
500 g/mol and a molecular formula of  $\text{RO}-(\text{CH}_2\text{CHR}''\text{O})_n\text{-R}'$ ; wherein:

10 R is selected from the group consisting of a C1-C10 aliphatic group, a C5-  
C10 cycloaliphatic group, a C7-C10 araliphatic group, a C1-C10 aliphatic group  
comprising a nitrogen atom or oxygen atom, a C5-C10 cycloaliphatic group  
comprising a nitrogen atom or oxygen atom, and a C7-C10 araliphatic group  
comprising a nitrogen atom or oxygen atom;

15 R' is selected from the group consisting of R, hydrogen, acetyl, propionyl,  
and butyryl, provided that the at least one compound has no more than one  
hydroxyl group per molecule;

R'' is hydrogen or a C1-C5 alkyl group; and

n is an integer greater than or equal to 1.

2. The composition of Claim 1 which is 60-95 wt% blowing agent and  
20 40-5 wt% blowing agent enhancer, based on blowing agent and blowing agent enhancer.

3. The composition of Claim 2 in which the blowing agent comprises  
HCFC-123, HCFC-141b, HCFC-22, HCFC-142b, HFC-134a, HFC-245fa, HFC-245ca,  
HFC-236ea, HFC-365mfc, or a mixture of any of these.

25

4. The composition of Claim 2 in which the blowing agent comprises  
HCFC-141b, HFC-134a, HFC-245fa, or a mixture of any of these.

5. The composition of Claim 2 in which the blowing agent comprises  
30 HFC-134a, HFC-236ea, HFC-365mfc, HFC-245fa, or a mixture of any of these.

6. The composition of Claim 2 in which the blowing agent comprises HFC-245fa.

5           7. The composition of Claim 2 in which the blowing agent enhancer comprises propylene glycol monomethyl ether, propylene glycol monopropyl ether, propylene glycol monobutyl ether, or a mixture of any of these.

8. The composition of Claim 2 in which the blowing agent enhancer  
10 comprises dipropylene glycol dimethyl ether.

9. The composition of Claim 2 in which the blowing agent enhancer comprises diethylene glycol monomethyl ether.

15           10. The composition of Claim 2 which also comprises one or more of a catalyst, a silicone-based surfactant, a flame retardant, a chain extender, or a mixture of any of these.

11. The composition of Claim 1 which is 75-90 wt% blowing agent and  
20 25-10 wt% blowing agent enhancer, based on blowing agent and blowing agent enhancer, the blowing agent comprising HCFC-123, HCFC-141b, HCFC-22, HCFC-142b, HFC-134a, HFC-245fa, HFC-245ca, HFC-236ea, HFC-365mfc, or a mixture of any of these, and the blowing agent enhancer comprising propylene glycol monomethyl ether, propylene glycol monopropyl ether, propylene glycol monobutyl ether,  
25 dipropylene glycol dimethyl ether, diethylene glycol monomethyl ether, or a mixture of any of these.

12. A composition useful for producing a polyurethane foam, the composition comprising a silicone-based surfactant, and a blowing agent enhancer comprising at

least one compound having a molecular weight less than about 500 g/mol and a molecular formula of  $\text{RO}-(\text{CH}_2\text{CHR}''\text{O})_n-\text{R}'$ ; wherein:

R is selected from the group consisting of a C1-C10 aliphatic group, a C5-C10 cycloaliphatic group, a C7-C10 araliphatic group, a C1-C10 aliphatic group comprising a nitrogen atom or oxygen atom, a C5-C10 cycloaliphatic group comprising a nitrogen atom or oxygen atom, and a C7-C10 araliphatic group comprising a nitrogen atom or oxygen atom;

R' is selected from the group consisting of R, hydrogen, acetyl, propionyl, and butyryl, provided that the at least one compound has no more than one hydroxyl group per molecule;

R'' is hydrogen or a C1-C5 alkyl group; and

n is an integer greater than or equal to 1.

13. The composition of Claim 12 which is 10-90 wt% silicone-based surfactant and 90-10 wt% blowing agent enhancer, based on silicone-based surfactant and blowing agent enhancer.

14. The composition of Claim 13 in which the silicone-based surfactant is a polyether-polysiloxane surfactant.

15. The composition of Claim 13 in which the blowing agent enhancer comprises propylene glycol monomethyl ether, propylene glycol monopropyl ether, propylene glycol monobutyl ether, or a mixture of any of these.

16. The composition of Claim 13 in which the blowing agent enhancer comprises dipropylene glycol dimethyl ether.

17. The composition of Claim 13 in which the blowing agent enhancer comprises diethylene glycol monomethyl ether.

18. The composition of Claim 13 which also comprises one or more of a catalyst, a blowing agent which is a hydrohalocarbon, a flame retardant, a chain extender, or a mixture of any of these.

5 19. The composition of Claim 12 which is 25-75 wt% polyether-polysiloxane surfactant and 75-25 wt% blowing agent enhancer, based on surfactant and blowing agent enhancer, the blowing agent enhancer comprising propylene glycol monomethyl ether, propylene glycol monopropyl ether, propylene glycol monobutyl ether, dipropylene glycol dimethyl ether, diethylene glycol monomethyl ether, or a mixture of any of these.

10

20. The composition of Claim 19 further comprising a blowing agent comprising HCFC-123, HCFC-141b, HCFC-22, HCFC-142b, HFC-134a, HFC-245fa, HFC-245ca, HFC-236ea, HFC-365mfc, or a mixture of any of these.

15

ML03113A.APP.DOC